

Application Serial No: 10/562,550
Responsive to the Office Action mailed on: October 2, 2008

REMARKS

This Amendment is in response to the Office Action mailed on October 2, 2008. Claims 1, 3, 5 and 7-12 are amended. Claim 1 is amended and is supported, for example, in the specification on page 12, line 22-page 13, line 5 and in Figures 3a-3d. Claim 3 is amended and is supported, for example, in the specification on page 2, lines 23-28 and page 15, lines 17-23 and in Figure 5. Claims 14-18 are new and include features of newly amended claims 9-13, respectively. No new matter is added. Claims 1-18 are pending.

§102 Rejections:

Claims 1-8 and 13 are rejected as being anticipated by Sunagawa (US Publication No. 2003/0009101). This rejection is traversed.

Claim 1 is directed to an ultrasonic diagnostic apparatus that requires, among other features, an analysis means for analyzing a state of the blood vessel based on a difference of a track of movement of the blood vessel wall whose movement amount was calculated with respect to time, and movement detection means for analyzing a phase of the ultrasonic echo signal in a direction traversing the blood vessel to calculate a movement amount of a blood vessel wall composing the blood vessel. Claim 1 also requires a boundary position detection means for detecting a plurality of boundary positions in the longitudinal direction of the blood vessel, and a stability judgment means for comparing the boundary position detected by the boundary position detection means with a detection result in a previous heartbeat cycle, thereby judging stability of a measurement state.

Sunagawa does not disclose or suggest these features. The rejection asserts that paragraph [0035] of Sunagawa discloses a stability judgment means for comparing the boundary position detected by the boundary position detection means with a detection result in a previous cycle. Paragraph [0035] teaches comparing phase data with phase data received previously to detect a phase difference, thereby calculating the movement velocity and displacement of living body tissue such as a blood vessel wall. This portion of Sunagawa arguably may be similar to the movement detection means of claim 1. However, nowhere does Sunagawa disclose or suggest a stability judgment means for

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comparing the boundary position detected by the boundary position detection means with a detection result in a previous heartbeat cycle, thereby judging stability of a measurement state, as required by claim 1. Accordingly, claim 1 requires a stability judgment means for judging stability of a measurement state as well as a movement detection means to calculate a movement amount of a blood vessel wall composing the blood vessel as opposed to Sunagawa, which merely discloses calculating movement velocity and displacement of living body tissue such as a blood vessel wall. For at least these reasons claim 1 is not suggested by Sunagawa and should be allowed. Claims 2, 4-8 and 13 depend from claim 1 and should be allowed for at least the same reasons.

Claim 3 is also directed to an ultrasonic diagnostic apparatus that requires, among other features, a boundary position detection means for detecting a plurality of boundary positions in the longitudinal direction of the blood vessel, and a stability judgment means for comparing the plurality of boundary positions detected by the boundary position detection means, thereby judging stability of a measurement state.

Sunagawa does not disclose or suggest these features. As discussed above, with respect to claim 1, Sunagawa discloses comparing phase data with phase data received previously to detect a phase difference, thereby calculating the movement velocity and displacement of living body tissue such as a blood vessel wall and does not teach judging the stability of a measurement state. Accordingly, nowhere does Sunagawa disclose or suggest a stability judgment means for comparing the plurality of boundary positions detected by the boundary position detection means, thereby judging stability of a measurement state, as required by claim 3. For at least these reasons claim 3 is not suggested by Sunagawa and should be allowed.

§103 Rejections:

Claims 11 and 12 are rejected as being unpatentable over Sunagawa in view of Fritz (US Publication No. 2003/0199762). This rejection is traversed. Claims 11 and 12 depend from claim 1 and should be allowed for at least the same reasons described above. Applicants do not concede the correctness of this rejection.

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Conclusion:

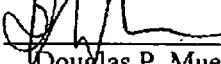
Applicants respectfully assert that claims 1-18 are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.

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By: 

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